Cisco MCS 7835-H2

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Cisco® Unified Communications is a comprehensive IP communications system of voice, video, data, and mobility products and applications. It enables more effective, more secure, more personal communications that directly affect both sales and profitability. It brings people together by enabling a new way of communicating—where your business moves with you, security is everywhere, and information is always available...whenever and wherever it is needed. Cisco Unified Communications is part of an integrated solution that includes network infrastructure, security, mobility, network management products, lifecycle services, flexible deployment and outsourced management options, end-user and partner financing packages, and third-party communications applications.

Product Overview

The Cisco® MCS 7835-H2 is a high-availability server platform for Cisco Unified Communications solutions. An integral part of a complete, scalable architecture for a new generation of high-quality IP voice solutions that run on enterprise data networks, the Cisco MCS 7835-H2 delivers the high performance and availability demanded by today's enterprise networks and represents an innovative solution that is easy to deploy and highly cost-effective. At only 2 rack units (2RUs) high, the Cisco MCS 7835-H2 offers tremendous power in a low-profile chassis that minimizes rack space. The Cisco MCS 7835-H2 runs a variety of Cisco Unified Communications applications, such as Cisco Unified Communications Manager (formerly known as Cisco Unified CallManager).

Features of the Cisco MCS 7835-H2 follow:

- Intel 5140 Xeon 2.33-GHz processors, an 1333-MHz front side bus (FSB), and 4 MB of Layer 2 cache
- 2-GB PC2-5300 667-MHz double-data-rate 2 (DDR2) memory with online spare capabilities
- Smart Array P400 Redundant Array of Independent Disks (RAID) Controller with 256-MB cache
- Dual-port Gigabit Ethernet controller (embedded)
- Quick-deployment third-party rail kit
- Support for Integrated Lights Out 2 (iLO 2) server management
- Support for up to 8 small form-factor hot-plug hard drives
- Hot-plug redundant power supplies
- Hot-plug redundant fans

Supported Applications

The Cisco MCS 7835-H2 can run any of the following Cisco applications:

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- Cisco Unified Communications Manager—Up to 2500 Cisco Unified IP phones per server
- Cisco Emergency Responder—Up to 20,000 Cisco Unified IP phones
- Cisco Unified Presence
- Cisco Unified Intelligent Contact Management Enterprise
- Cisco Unified Intelligent Contact Management Hosted
- Cisco Unified Contact Center Enterprise
- Cisco Unified Contact Center Hosted
- Cisco Unified Contact Center Express
- Cisco Unified IP Interactive Voice Response (IVR)
- Cisco Unified MeetingPlace® conferencing
- Cisco Unified MeetingPlace Express
- Cisco Unified IP Queue Manager
- Cisco Unity® Unified Messaging—Up to 48 ports and up to 2000 mailboxes
- Cisco Unity Connection
- Cisco TelePresence Manager
- Cisco Digital Media System (DMS)

Key Features and Benefits

Performance

The Cisco MCS 7835-H2 is a robust, highly available server platform designed to support today's Cisco Unified Communications applications. It uses a Smart Array P400 Controller with a 256-MB cache to provide onboard RAID support. The Cisco MCS 7835-H2 occupies only 2RUs of space while providing the features most requested in a high-availability server platform. At product introduction the Cisco MCS 7835-H2 will ship with an Intel Xeon 2.33-GHz processor.

High Availability

High availability on the Cisco MCS 7835-H2 is achieved through the following mechanisms:

- Redundant hot-swap 800W power supplies
- Redundant hot-swap fans
- Hot-swap SAS hard drives configured using RAID 1

Serviceability

System Health LEDs

The Cisco MCS 7835-H2 provides system health LEDs and unit identification lights on the front and back of the server to make pinpointing system problems easier than ever. When an internal component fails, this indication is made on an internal component LED (amber) and on the front panel of the Cisco MCS 7835-H2. If the item is serviceable without removing the server hood, as in the case of a redundant power supply, the external health LED illuminates. If the item is serviceable by removing the hood, as in the case of a fan failure, the internal health LED illuminates. If no failures have occurred, the system health LEDs are green. If a failure has occurred but a redundant feature has enabled the system to continue running, the LED is amber. If the failure is critical and has caused the system to shut down, the LED is red.

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Integrated Lights Out 2

The iLO 2 Standard and Advanced is included on this server. Combining essential management functions and diagnostics with basic lights-out functions as standard components of the server, iLO 2 is available at no charge. The iLO 2 standard provides fundamental server control and monitoring by integrating essential lights-out technology directly into the Cisco MCS 7835-H2 server architecture.

- Essential lights-out features include remote power control, text-based console, logs, status, and alert forwarding.
- The easy-to-use, dedicated lights-out LAN port is accessible through a browser interface.
- The iLO 2 standard saves a valuable PCI slot for additional functions and reduces installation and setup time.
- The iLO 2 standard eliminates the need for an external power adapter or any other internal or external cables.
- The iLO 2 standard provides a rich suite of security features, including Secure Sockets Layer (SSL).
- The iLO 2 standard provides a scalable solution by allowing group administration of iLO processors.

Redundant ROM

In the Cisco MCS 7835-H2, the ROM is divided into two logical sections. When the system boots, the primary ROM section is executed and used in server operation. During a ROM flash, the backup section is flashed. When the flash is fully completed, the backup section becomes the primary. If under rare conditions the flash does not complete safely, potentially because of power interruption, the backup is available to boot the system. In the situation where both ROM images are valid, the user can select which image to use at boot time.

DAT Tape Support

The Cisco MCS 7835-H2 can support an optional 36-/72-GB USB external Digital Audio Tape (DAT) drive or an optional USB rack-mount DAT drive. This tape drive connects through one of the 4 USB 2.0 ports provided by the Cisco MCS-7825-H2 server. The external DAT drive is orderable using part number DAT-USB-EXT-72=, and the rack-mounted 36-/72-GB DAT drive is orderable using part number DAT-USB-RM-72=.

Product Specifications

Table 1. Processor Specifications

Processor (CPU)	Intel 5140 Xeon DP
Processor internal clock speed	2.33 GHz
Level 2 cache	4096 KB
Maximum processors	2
Processors installed	1
Basic input/output system (BIOS) type	Flash

Table 2. Memory Specifications

Memory maximum	32 GB
Memory bus clock	667 MHz
Memory technology	PC2-5300 667-MHz DDR2 synchronous dynamic RAM (SDRAM)

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Multibit error mitigation	Advanced Error Checking and Correcting (AECC)
Total RAM slots	8
Memory installed	2 GB (two 1-GB dual in-line memory modules [DIMMs])

Table 3. RAID Controller Specifications

Controller model	HP Smart Array P400 Controller
Interface	PCI Express
Cache	256 MB
Battery-backed write cache	Yes
RAID levels supported	1

Table 4. Hard Disk Specifications

Hot-swappable bays	8
Hard disk interface type	SAS
Hard disk Installed	Two 72 GB (RAID 1) – all product IDs of server
Hard disk (RPM)	10,000
Hard disk average seek time	4 ms
Data-transfer rate	300 MB per second

Table 5. Network Interface Specifications

Network interface card (NIC)	Dual onboard 10/100/1000
Connector	Two RJ-45 connectors on rear of server
10BASE-T cable support	Category 3, 4, or 5 unshielded twisted-pair (UTP) (2 or 4 pair) up to 328 ft (100m)
100BASE-TX cable support	Category 5 UTP (2 pair) up to 328 ft (100m)
1000BASE-T cable support	Category 5 UTP, 5E UTP, 6 UTP (2 pair) up to 328 ft (100m)

Table 6. Interface Port Specifications

Serial ports	1
Parallel ports	0
USB 2.0 ports	5 (2 front, 2 rear, and 1 inside)
Keyboard ports	1 PS2
Mouse ports	1 PS2
Audio ports	None
System management ports	RJ-45 for HP iLO 2
Video Graphics Array (VGA) ports	1 front and 1 rear

Table 7. Security Capabilities

- Power-on password
- Keyboard password
- Selectable boot device
- Diskette drive control
- QuickLock, network server mode
- Serial interface control
- Administrator's password
- Disk configuration lock

Table 8. Standards Compliance

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- Advanced configuration and power interface (ACPI) 2.0 compliant
- PCI 2.2 compliant
- Wake-on-LAN (WoL) support
- Microsoft Logo certifications
- USB 2.0 support

Table 9. Expansion Options and Interfaces

PCIe non-hot plug slots	1
PCI-X non-hot plug 133-MHz, 64-bit slots	2

Table 10. System Unit Specifications

Dimensions (H x W x D)	3.38 x 17.54 x 26.01 in.	8.59 x 44.54 x 66.07 cm
Weight	60 lb	27.22 kg
Input requirements (per power supply)	Rated line voltage	100–132 VAC and 200–240 VAC
	Rated input current	10A (100 VAC), 10A (120 VAC), and 6.1A (200 VAC)
	Rated input frequency	50–60 Hz
	Rated input power	1000, 1056, and 1205W
BTU rating	BTU/hr	3490, 3680, and 4150
Power supply output power	Rated steady-state power	800, 850, and 1000W
Temperature Range	Operating	50°to 95°F (10°to 35°C) at sea level wi th an altitude de-rating of 1.8°F per 1000 ft (1.0°C pe r 304.8 m) to 10,000 ft (3048 m); no direct sunlight allowed. ; Maximum rate of change is 18°F/hr (10° C/hr);. upper operating limit is 10,000 ft (3,048 m) or 70 Kpa/10.1 psia;. system performance may be reduced if operating with a fan fault or above 30°
Temperature Range	Non-operating	-22°to 140°F (-30°to 60°C) Maximu m rate of change is36°F/Hr (20°C/Hr). Upper non-operating limit is 30,000 ft (9,144 m) or 30.3KPa/4.4 psia.
Maximum Wet-bulb Temperature	101.7°F	38.7°C
Relative Humidity (non-condensing)	Operating	10% to 90% relative humidity (Rh), 28°C m aximum wet bulb temperature
Relative Humidity (non-condensing)	Non-operating	5% to 95% relative humidity (Rh), 38.7°C maximum wet bulb temperature.
Acoustic Noise	Idle Minimum (Fixed Disk Drives Spinning)	L WAd (BELS) 6.4 L pAm (dBA) 47
Acoustic Noise	Operating Minimum (Random Seeks to Fixed Disks)	L WAd (BELS) 6.6 L pAm (dBA) 49

Ordering Information

To place an order, visit the Cisco Ordering Home Page.

Table 11. Ordering Information

Product Name	Part Number
Cisco CallManager 3.3	CALLMANAGER-3.3
Cisco Unified CallManager 4.0	CALLMANAGER-4.0
Cisco Unified CallManager 4.1	CALLMANAGER-4.1
Cisco Unified CallManager 4.2	CALLMANAGER-4.2
Cisco Unified Communications Manager 4.3	CALLMANAGER-4.3
Cisco Emergency Responder	See Emergency Responder datasheet
Cisco Unified Presence	See Unified Presence datasheet
Cisco Unified Intelligent Contact Management Enterprise	ICM-BUNDLE

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Cisco Unified Intelligent Contact Management Hosted	HOSTED-BUNDLE
Cisco Unified Contact Center Enterprise	IPC-BUNDLE
Cisco Unified Contact Center Hosted	HOSTED-BUNDLE
Cisco Unified Contact Center Express	• IPCX-40-STANDARD • IPCX-40-ENHANCED • IPCX-40-PREMIUM • UCCX-45-STANDARD • UCCX-45-ENHANCED • UCCX-45-PREMIUM
Cisco Unified Customer Voice Portal	ISN-APSSVRLIC
Cisco Unified IP IVR	IPIVR-3.5=
Cisco Unified MeetingPlace conferencing	See Unified MeetingPlace datasheet
Cisco Unified MeetingPlace Express	See Unified MeetingPlace Express datasheet
Cisco Unified IP Queue Manager	IPQM-3.5=
Cisco Unity Unified Messaging	UNITY-BUNDLE
Cisco Unity Connection	UNITYCN-BUNDLE
Cisco TelePresence Manager	CTS-MAN1.0
Cisco Digital Media System (DMS)	Refer to Digital Media System datasheet

Server Spares

Table 12. Ordering Information for Spare Servers by Application

Application	Spare Part Number
Cisco Unified Communications Manager	MCS-7835-H2-IPC1
Cisco Emergency Responder	MCS-7835-H2-IPC1
Cisco Unified Presence	MCS-7835-H2-IPC1
Cisco Unified Intelligent Contact Management Enterprise	MCS-7835-H2-CCE1
Cisco Unified Intelligent Contact Management Hosted	MCS-7835-H2-CCE1
Cisco Unified Contact Center Enterprise	MCS-7835-H2-CCE1
Cisco Unified Contact Center Hosted	MCS-7835-H2-CCE1
Cisco Unified Contact Center Express	MCS-7835-H2-CCX1
Cisco Unified Customer Voice Portal	MCS-7835-H2-CCE1
Cisco Unified IP IVR	MCS-7835-H2-CCX1
Cisco Unified MeetingPlace conferencing	MCS-7835-H2-RC1
Cisco Unified MeetingPlace Express	MCS-7835-H2-RC1
Cisco Unified IP Queue Manager	MCS-7835-H2-CCX1
Cisco Unity Unified Messaging	MCS-7835-H2-ECS1
Cisco Unity Connection	MCS-7835-H2-UC1
Cisco TelePresence Manager	MCS-7835-H2-CTS1
Cisco Digital Media System	MCS-7835-H2-DM21

Field Replaceable Spares

Table 13. Ordering Information for Server Spare Parts

Description	Spare Part Number
Spare 1024-MB SDRAM DIMM for Cisco MCS 7835-H2	MEM-7835-H2-1GB=
Spare 72-GB SAS drive for Cisco MCS 7835-H2	HDD-7835-H2-72=
Spare 800W power supply for Cisco MCS 7835-H2	PWR-7835-H2=

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Spare fan for Cisco MCS 7835-H2	FAN-7835-H2=

Identifying CPU Speed of Server

As the Cisco MCS 7835-H2 matures and Intel replaces slower processors, the processor speeds will change.

Table 14. Manufacturing Part Numbers by Processor Speed

Processor	Manufacturing Part Number Located on Server	Introduction
Intel Xeon 2.33GHz 4M L2	74-4487-01	Initial production of server

Warranty Information

Cisco offers a 1-year limited hardware warranty on Cisco Media Convergence Servers. For terms and conditions of this warranty, refer to http://www.cisco.com/univercd/cc/td/doc/es_inpck/1y1cen__.htm.

Cisco Unified Communications Services and Support

Using the Cisco Lifecycle Services approach, Cisco and its partners offer a broad portfolio of end-to-end services to support the Cisco Unified Communications system. These services are based on proven methodologies for deploying, operating, and optimizing IP communications solutions. Initial planning and design services, for example, can help you meet aggressive deployment schedules and minimize network disruption during implementation. Operate services reduce the risk of communications downtime with expert technical support, and optimize services enhance solution performance for operational excellence. Cisco and its partners offer a system-level service and support approach that can help you create and maintain a resilient, converged network that meets your business needs.

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Printed in USA C78-383102-01 03/08

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